

Release notes for ENDF/B Development n-029\_Cu\_063  
evaluation

**ENDF**  
B-VII.**dev**

April 26, 2017

- fudge-4.0 Warnings:

1. Found a gamma with zero energy  
*Reading ENDF file: ../n-029\_Cu\_063.endf / Traceback (most recent call last): / File "/home/dbrown/fudge.trunk/fudge/legacy/converting/ENDFToGND/ENDF\_ITYPE\_0\_Misc.py", line 2082, in readMF12\_13 (Error # 0): Zero en. gamma*

```
raise Exception("Zero-energy gamma from %f eV to %f eV in MF12 MT%d" % (parentEnergy,finalEnergy,MT))
```

2. Found a gamma with zero energy  
*Reading ENDF file: ../n-029\_Cu\_063.endf (Error # 1): Zero en. gamma*

```
Exception: Zero-energy gamma from 2337400.000000 eV to 2336560.000000 eV in MF12 MT63
```

3. A covariance format not yet supported by fudge (LRF=7 covariances)  
*Reading ENDF file: ../n-029\_Cu\_063.endf / Exception: Zero-energy gamma from 2337400.000000 eV to 2336560.000000 eV in MF12 MT63 (Error # 0): Cov. unimp. (e)*

```
WARNING: skipping LRF=7 resonance covariances!
```

4. FIXME: Another genuine fudge bug!  
*(Error # 2): Fudge check bug*

```
FAILURE: ENDF EVALUATION CHECKING HALTED BECAUSE list index out of rangelist index out of range
```

- fudge-4.0 Errors:

1. Exception IndexError was thrown  
*FAILURE: ENDF EVALUATION CHECKING HALTED BECAUSE list index out of rangelist index out of range (Error # 1): IndexError*

```
IndexError: list index out of range
```

- njoy2012 Warnings:

1. Evaluation has no unresolved resonance parameters given  
*unresr...calculation of unresolved resonance cross sections (0): No URR*

```
---message from unresr---mat 2925 has no unresolved parameters
copy as is to nout
```

2. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (0): HEATR/hinit (4)*

```
---message from hinit---mf6, mt 16 does not give recoil za= 29062
one-particle recoil approx. used.
```

3. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (1): HEATR/hinit (4)*

```
---message from hinit---mf6, mt 22 does not give recoil za= 27059
one-particle recoil approx. used.
```

4. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (2): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt 28 does not give recoil za= 28062
one-particle recoil approx. used.
```
5. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (3): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt 32 does not give recoil za= 28061
one-particle recoil approx. used.
```
6. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (4): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt 41 does not give recoil za= 28061
one-particle recoil approx. used.
```
7. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (5): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt 91 does not give recoil za= 29063
one-particle recoil approx. used.
```
8. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (6): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt102 does not give recoil za= 29064
photon momentum recoil used.
```
9. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (7): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt103 does not give recoil za= 28063
one-particle recoil approx. used.
```
10. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (8): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt104 does not give recoil za= 28062
one-particle recoil approx. used.
```
11. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (9): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt105 does not give recoil za= 28061
one-particle recoil approx. used.
```
12. Recoil is not given, so one-particle recoil approximation used.  
*heatr...prompt kerma (10): HEATR/hinit (4)*  

```
---message from hinit---mf6, mt107 does not give recoil za= 27060
one-particle recoil approx. used.
```
13. Evaluation has no unresolved resonance parameters given  
*purr...probabalistic unresolved calculation (0): No URR*

---message from purr---mat 2925 has no unresolved parameters  
copy as is to nout

14. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (0): ACER/check energy distributions (0)*  
  
check energy distributions  
consis: ep.gt.epmax 9.686976E-12 with q.lt.0 for (n,x) at e 1.000000E-11 -> 1.000000E-11
15. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (1): ACER/check energy distributions (0)*  
  
check energy distributions  
consis: awr.lt.180---this is probably an error.
16. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (2): ACER/check energy distributions (0)*  
  
check energy distributions  
consis: shifting eprimes greater than epmax and renorming the distribution
17. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (3): ACER/check energy distributions (0)*  
  
check energy distributions  
consis: ep.gt.epmax 1.937395E+01 with q.lt.0 for (n,x) at e 2.000001E+01 -> 1.943843E+01
18. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (4): ACER/check energy distributions (0)*  
  
check energy distributions  
consis: awr.lt.180---this is probably an error.
19. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (5): ACER/check energy distributions (0)*  
  
check energy distributions  
consis: shifting eprimes greater than epmax and renorming the distribution
20. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (6): ACER/check energy distributions (0)*  
  
check energy distributions  
consis: ep.gt.epmax 9.686976E+01 with q.lt.0 for (n,x) at e 1.000000E+02 -> 9.694610E+01
21. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (7): ACER/check energy distributions (0)*  
  
check energy distributions  
consis: awr.lt.180---this is probably an error.
22. There is bad Kalbach parameter ( $r(E)$  or otherwise)  
*check...ace consistency check (8): ACER/check energy distributions (0)*

- ```

check energy distributions
consis: shifting eprimes greater than epmax and renorming the distribution

```
- 23. There is bad Kalbach parameter (r(E) or otherwise)
 

```

check...ace consistency check (9): ACER/check energy distributions (0)

check energy distributions
consis: ep.gt.epmax 1.065566E+02 with q.lt.0 for (n,x) at e 1.100000E+02 -> 1.067883E+02

```
- 24. There is bad Kalbach parameter (r(E) or otherwise)
 

```

check...ace consistency check (10): ACER/check energy distributions (0)

check energy distributions
consis: awr.lt.180---this is probably an error.

```
- 25. There is bad Kalbach parameter (r(E) or otherwise)
 

```

check...ace consistency check (11): ACER/check energy distributions (0)

check energy distributions
consis: shifting eprimes greater than epmax and renorming the distribution

```

- **acelst** Warnings:

1. The incident energy grid is not monotonic for this angular distribution
 

```

0: Bad Ang. Dist.

```

```

ACELST WARNING - Processing Ang.Dist.MT          2
                  E-grid non-monotonic  2.000000000E+01 2.000000000E+01

```

- **endf2htm** Warnings:

1. Build of a section of the HTML page failed because the format hasn't been implemented in ENDF2HTML.
 

```

MF32MT151: Unimplemented

```

```

At line 2659 of file endf.f
Fortran runtime error: Bad value during integer read

```

- **xsectplotter** Warnings:

1. Found a gamma with zero energy
 

```

***** Reading ../n-029-Cu_063.endf ***** / File "/home/dbrown/fudge.trunk/fudge/legacy/conv
line 2082, in readMF12_13 (Error # 0): Zero en. gamma

```

```

raise Exception("Zero-energy gamma from %f eV to %f eV in MF12 MT%d" % (parentEnergy,finalEnergy,MT))

```

2. Found a gamma with zero energy
 

```

***** Reading ../n-029-Cu_063.endf ***** (Error # 14): Zero en. gamma

```

```

Exception: Zero-energy gamma from 2337400.000000 eV to 2336560.000000 eV in MF12 MT63

```

3. A covariance format not yet supported by fudge (LRF=7 covariances)
 

```

/ Reading covariances (MFs 32) (Error # 0): Cov. unimp. (e)

```

WARNING: skipping LRF=7 resonance covariances!

• xsectplotter Errors:

1. Generic error message  
(Error # 1): Error

ERROR: Plot generation failed!!!

2. Generic error message  
(Error # 2): Error

ERROR: Plot generation failed in stdout!!!